IN THE CLAIMS

Claim 1 (**currently amended**). Multipart pump head, comprising at least three rigid plates, said at least three rigid plates comprising two outer plates (201, 205) and one inner plate (203), and at least two elastic diaphragms (204, 202) arranged between these plates (201, 203, 205), the plates (201, 203, 205) forming at least one pumping chamber (211) and at least two shut-off chambers (210, 212), in the geometry of a spherical segment, a spherical zone, a cylinder or a truncated cone, each with an inlet orifice (240) and an outlet orifice (241) for feed material,
the pumping chamber (211) and the shut-off chambers (210, 212) being separated by the diaphragms (204, 202) in each case into a product space (230, 231, 232) and a control space (220, 221, 222), and the pumping chamber (211) and the shut-off chambers (210, 212) forming, together with an inlet duct (207), **for supplying a feed material to one of said shut-off chambers (210),** connecting ducts (208) and (209) **connecting the product spaces of the chambers to one another,** and an outlet duct (206) **for discharge of pumped product**, a passage duct **through the pump**, ~~the pumping chamber (211) and the shut-off chambers (210, 212) being separated by the diaphragms (204, 202) in each case into a product space (230, 231, 232)~~ and a control space (220, 221, 222)~~, and~~ **;** the control spaces (220, 221, 222) having control lines (119, 120, 121) which are connected to a control unit (100, 115), wherein the control space of at least one pumping chamber is enlarged sufficiently to accommodate an axially movable disc (1001) with an extended rod (1002) attached on one side, which is inserted into said control space, with the rod attached on one side of the movable disc extending through the outer plate and projecting outside the head and is adjustable ~~(1003)~~ outside the pump, whereby the disc (1001) located in the control space is movable axially to reduce or increase the maximum diaphragm travel in the pumping chamber, so that the liquid volume conveyed per conveying stroke can be varied and the pump **head** is operable in a part-stroke operating mode, without the dead-space volume in the product space being increased **and the pump has a product space (231) defined, in part, by a surface having a vertex and a groove (213) which runs from the vertex of the product space to the outlet orifice.**

Claim 2 (original). Diaphragm pump with a multipart pump head according to Claim 1, wherein said diaphragm pump has a decentral electropneumatic control unit.

Claim 3 (**canceled**).

Claim 4 (original). Diaphragm pump according to Claim 2, wherein the pumping chamber (211) and the shut-off chambers (210, 212) are sealed by means of the diaphragms (204, 202).

Claim 5 (original). Diaphragm pump according to Claim 2, wherein the diaphragms (204, 202) are of an elastic material.

Claim 6 (original). Diaphragm pump according to Claim 2, wherein the pump is comprised of at least three plates (201, 203, 205), and the pumping chamber (211) and the shut-off chambers (210, 212) are formed by depressions (210', 211', 212') in the plates (201, 203, 205).

Claim 7 (original). Diaphragm pump according to Claim 2, wherein the movable disc (1001) on the side facing the diaphragm is planar or has an obtuse cone or is adapted to the shape of the product-side pumping chamber and is provided with a plurality of bores (1007).

Claim 8 (original). Diaphragm pump according to Claim 2, wherein the diaphragm (204) of the pumping chamber is a chambered diaphragm.

Claim 9 (**currently amended**). Diaphragm pump according to Claim 2, wherein ~~it is a double diaphragm pump which consists of three plates and in which~~ all the pumping and shut-off chambers are formed in the middle plate.

Claim 10 (**currently amended**). Diaphragm <u>pump</u> according to Claim 2, wherein in the middle plate four shut-off chambers (1200, 1201, 1202, 1203) are associated with said at least one pumping chamber (1205).

Claim 11 (original). Diaphragm pump according to Claim 2, consisting of three plates and operable as a multi-way distributor valve.

Claim 12 (**currently amended**). A multi-way distributor valve, ~~**characterized in that the latter**~~ comprised of the diaphragm pump of Claim 11 having a central material inlet duct (1308'), a distributor chamber (1310') and a multiplicity of connecting ducts (1312') having associated shut-off chambers (1314') and following outlet ducts (1316').

Claim 13 (original). Multiduct diaphragm valve comprised of the multipart pump head of Claim 1, having three plates, wherein a distributor chamber is connected by means of an inlet duct via a connecting duct to at least one shut-off chamber which has an outlet duct, and the chambers have depressions of identical size and can be activated separately, so that, for the passage of a material, at least two chambers must be opened simultaneously in the desired throughflow direction, and all the chambers are actuated by a decentral control unit.

Claim 14 (original). Diaphragm pump according to Claim 2, wherein at least one outer plate is thermally controllable.

Claim 15 (original). Diaphragm pump according to Claim 2 further comprising controllable valves along with a decentral control unit, wherein, in the throughflow direction through the pump, the inlet duct with a throughflow shut-off chamber and a connecting duct to the pumping chamber has a larger hydraulic cross section than the discharging connecting duct with a following shut-off chamber and outlet duct.

Claim 16 (original). Diaphragm pump according to Claim 2 with controllable valves and with a decentral control unit, wherein the volume of the pumping chamber is in the range of 0.005 ml to 1000 ml.

Claim 17 (original). Diaphragm pump according to Claim 2, with controllable valves along with a decentral control unit, wherein the product-side dead-space volume of the pumping chamber is 0,1% to 20% of the pumping chamber volume.

Claim 18 (original). Diaphragm pump according to Claim 2, wherein the product spaces of the shut-off chambers (210, 212) are designed smaller than the product space of the pumping chamber (211).

Claim 19 (original). Diaphragm pump according to Claim 2, wherein at least one pumping chamber is provided in the middle plate, and at least three smaller shut-off chambers are associated with each pumping chamber and each shut-off chamber has a connecting duct to the pumping chamber and an inlet duct or outlet duct for the supply or discharge of at least one fluid, and all the chambers are separately activatable via a decentral control unit.

Claim 20 (original). Diaphragm pump according to Claim 2, wherein a plurality of inlet or outlet ducts with shut-off chambers are associated with a pumping chamber and a mixing chamber is provided in at least one outlet duct, said mixing chamber being associated with a second pumping chamber with a plurality of inlet and outlet ducts and shut-off chambers, adapted to pump around a sample intercepted in the mixing chamber, so that, when a separate diluting agent is supplied into the mixing chamber, the sample located there can be diluted or mixed, in order, after mixing, to extract the diluted sample by pumping it away and to analyze it.

Claim 21 (canceled).

Claim 22 (original). A method for conveying liquids with a viscosity range of 0.001 Pas to 10 Pas, which comprises conveying said liquids with a diaphragm pump of Claim 1.

Claim 23 (canceled).

Claim 24 (original). Diaphragm pump according to Claim 5, wherein said elastic material is an elastomer, silicone, fluoroelastomer, polytetrafluoroethylene or a rubber.

Claim 25 (original). Diaphragm pump according to Claim 5, wherein said elastic material is comprised of at least two interconnected material layers having different moduli of elasticity.

Claim 26 (original). Diaphragm pump according to Claim 1, wherein the travel of one or more of the diaphragms which separate the product space (231) and control space (221) of the pumping chamber (211) or the product spaces (230, 232) and control spaces (220, 222) of the shut-off chambers (210, 212) is limited to produce a maximum deformation of said one or more diaphragms into said product space of 20%.

Claim 27 (original). Diaphragm pump according to Claim 26, wherein said maximum deformation is 10%.

Claim 28 (original). Diaphragm pump according to Claim 27, wherein said maximum deformation is less than 5%.

Claim 29 (original). Diaphragm pump according to Claim 26, wherein said travel is limited by dimensions of one or more of the shut-off chambers, pumping chamber, control spaces and product spaces